

US006600695B1

(12) United States Patent

Nugent et al.

(10) Patent No.: US 6,600,695 B1 (45) Date of Patent: Jul. 29, 2003

(54)	METHOD AND APPARATUS FOR
	RETRIEVING AN UNMANNED
	UNDERWATER VEHICLE

(75) Inventors: David M. Nugent, Newport, RI (US);

Thomas D. Barron, Newport, RI (US); Thomas A. Frank, Middletown, RI

(US)

- (73) Assignce: The United States of America as represented by the Secretary of the Navy, Washington, DC (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21)	Appl. No.: 10/224,228
(22)	Filed: Aug. 19, 2002
(51)	Int. Cl. ⁷ B63G 8/00
(52)	U.S. CI

- (56) References Cited

U.S. PATENT DOCUMENTS

3,757,722 A	*	9/1973	Seiple	 114/322

5,291,194 A	٠	3/1994	Ames 340/850
5,396,859 A	٠	3/1995	Hillenbrand et al 114/312
5,398,636 A	•	3/1995	Hillenbrand 114/312
5,447,115 A	•	9/1995	Moody 114/312
5,748,102 A	٠	5/1998	Barron 340/850

^{*} cited by examine

Primary Examiner—Ian J. Lobo (74) Attorney, Agent, or Firm—James M. Kasischke; Michael F. Oglo; Jean-Paul A. Nasser

(57) ABSTRACT

A system and method is disclosed for retrieving an untethered submarine tube-retrievable UUV in which the untethered submarine tube-retrievable UUV may be retrieved through the torpedo tube of a submarine. The untethered submarine tube-retrievable UUV has a capture cable extending therefrom with a transducer to produce a homing signal. A tethered homing signal seeking UUV is guided toward the homing signal. Capture arms on the tethered homing signal seeking UUV engage the capture cable and guide the capture cable to one of several cable snagging eye-members. The winching cable is then winched back into the torpedo tube thereby drawing the untethered submarine tube-retrievable UUV into the torpedo tube.

20 Claims, 5 Drawing Sheets

